

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Said claims are indefinite because of the limitation to a property that is not present in the claimed invention. Specifically, the claims are drawn to a carpet backing (i.e., intermediate product), not an actual carpet (i.e., final product). Since the recited property of tuft bind is a measure of the bond strength of pile yarns tufted in a final carpet product, an intermediate product of polyurethane reaction product having the intended use of a carpet backing does not actually possess a tuft bind property. Hence, said claims are rejected as indefinite.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-23 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US 2002/0090488 issued to Kurth et al.

Kurth discloses a bio-based carpet material comprising tufts, a backing, a pre-coat, and a backing material wherein the pre-coat includes the reaction product of a polyisocyanate and a polyol to form a polyurethane composition (abstract). The polyol may be petroleum based polyol and a vegetable oil based polyol (section [0013]). The reaction product may also include a cross-linker and a catalyst (section [0013]). The vegetable oil based polyol has increased and selectable functionality, which is produced by a two-stage transesterification process from a multifunctional alcohol and a multifunctional component (section [0023]). The multifunctional alcohol may be glycerin (section [0023]), while the vegetable oil is preferably blown soy oil (section [0025]). The bio-based polyurethane composition may also contain a filler (see at least Examples 23, 54, and 82).

Thus, Kurth teaches the invention of claims 1-21 with the exception of (a) the amount of unreacted vegetable oil in the polyol reaction product and (b) the tuft bind of the carpet backing. Regarding the former exception, while Kurth fails to explicitly teach the claimed amount of unreacted vegetable oil in the polyol reaction product, the reference clearly states one of the objectives of the invention is to improve the functionality of the vegetable oil based polyol:

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[0011] The difficulties in the past that occurred due to the use of vegetable oil as the polyols to produce a urethane product include the inability to regulate the functionality of the polyol resulting in variations in urethane product where the industry demands relatively strict specifications be met and the fact that urethane products, in the past, outperformed vegetable oil based products in quality tests, such as carpet backing pull tests.

[0012] An unresolved need therefore exists for an improved functionality, vegetable oil based polyol of increased and selectable functionality for use in manufacturing urethane materials such as, elastomers and foams. Also needed is a method of producing such urethane materials, in particular, carpet materials using the improved functionality, vegetable oil based polyol based on a reaction between isocyanates alone or as a prepolymer, in combination with the improved functionality polyol or a blend of the improved functionality polyol and other polyols including petrochemical based polyols. The products and methods of the present invention are particularly desirable because they relate to relatively inexpensive, versatile, renewable, environmentally friendly materials such as, vegetable oil, blown soy oil, or transesterified vegetable oil that forms a polyol of increased and selectable functionality that can be a replacement for soy or petroleum based polyether or polyester polyols typically employed.

Hence, it is reasonable to presume that the recited amount of unreacted polyol is inherent to the invention of Kurth. Support for said presumption is found in the use of similar starting materials (i.e., polyisocyanate, first polyol and vegetable oil polyol) and in the similar production steps (i.e., polyurethane reaction process) used to produce the carpet backing material. The burden is upon applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 495. In the alternative, the claimed amount of unreacted polyol would obviously have been provided by the process disclosed by Kurth. Note *In re Best*, 195 USPQ 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC 103 in addition to the rejection made above under 35 USC 102.

With respect to the latter exception, as noted above, the tuft bind property is not actually a property of the claimed invention (i.e., an intermediate product of polyurethane reaction product having the intended use as a carpet backing). As such, the recited tuft bind is not necessarily given patentable weight.

In the event said tuft bind property is given patentable weight and with respect to claims 22 and 23, it is reasonable to presume that the recited tuft bind is inherent to the invention of Kurth. Support for said presumption is found in the use of similar starting materials (i.e., polyisocyanate, first polyol and vegetable oil polyol) and in the similar production steps (i.e., polyurethane reaction process) used to produce the carpet backing material. The burden is upon applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 495. In the alternative, the claimed tuft bind would obviously have been provided by the process disclosed by Kurth. Note *In re Best*, 195 USPQ 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC 103 in addition to the rejection made above under 35 USC 102.

Therefore, claims 1-23 are rejected as being anticipated by or obvious over the cited Kurth reference.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl Juska whose telephone number is 571-272-1477. The examiner can normally be reached on Monday-Friday 10am-6pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached at 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Cheryl Juska/
Primary Examiner
Art Unit 1794

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